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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/747,473	12/22/2000	Swaminathan Ramesh	IN-5330	2342

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EXAMINER	
ASINOVSKY, OLGA	
ART UNIT	**PAPER NUMBER**
1711	6

DATE MAILED: 05/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/747,473	RAMESH ET AL.	
	Examiner	Art Unit	
	Olga Asinovsky	1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *30 September 2002* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-56* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☒ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *2&5* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Singer et al U.S. Patent 5,989,642.

Claim 1 discloses a curable, water-based coating composition comprising the reaction product of: (A) a water-based copolymer prepared by free-radical polymerization, said copolymer comprising the reaction product of: (I) a first block comprising the reaction product of (a) at least one ethylenically unsaturated monomer, and (b) at least one vinylaromatic hydrocarbon monomer, and (II) a second block comprising the reaction product of (a) a plurality of ethylenically unsaturated monomers different than (A)(I)(a), wherein at least one of said plurality includes at least one carbone functional group for modification=converting into a carbamate functional group; and (B) at least one cross-linking agent reactive with said carbamate functional group and dispersible in water.

Independent claim 33 discloses a method of preparing a curable, water-based coating composition, said method comprising the steps of: (A) forming a

first block, (B) polymerizing a second block having at least one carbonate functional group with the first block to establish a water-based copolymer, (C) converting the at least one carbonate functional group in the second block of the water-based copolymer into at least one carbamate functional group, and (D) combining the water-based copolymer with at least one cross-linking agent that is reactive with the carbamate functional group and dispersible in water.

Independent claim 50 discloses a method of preparing a cured film of a water-based coating composition, said method comprising the steps of: (A) forming a first block, (B) polymerizing a second block having at least one carbonate functional group with the first block to establish a water-based copolymer, (C) converting the at least one carbonate functional group in the second block of the water-based copolymer into at least one carbamate functional group, and (D) combining the water-based copolymer with at least one cross-linking agent that is dispersible in water and reactive with the carbamate functional group to form the water-based coating composition, (E) applying the water-based coating composition to a substrate, and (F) curing the water-based coating composition to form the cured film.

Independent claim 56 discloses a curable, water-based coating composition having broad definitions for ethylenically unsaturated monomers.

Singer discloses a method for applying a composite coating to a substrate, column 1, lines 51-65 including a basecoat and a transparent topcoat over the

basecoat. A clear topcoatig is a curable coating composition comprising acrylic materials. The acrylic materials are copolymers which can be produced by a free radical polymerization with an organic peroxide, column 6, line 34. A curable coating composition comprises (a) a first component comprising a polymer backbone having appended thereto at least one carbamate functional group, and (b) a second compound having a plurality of functional groups that are reactive with said carbonate group, column 21, claim 1. The first component represented by randomly repeating units of the formula at column 21, line 45, discloses x-units and y-units, which include ethylenically unsaturated monomers. The ethylenically unsaturated monomers can include vinyl aromatic monomer, column 5, line 46. The formula at column 21, line 45 represents applicants' claimed a first block (I) comprising (a) and (b) monomers and a second block (II) having converted carbamate functional group. The pendant carbamate functional groups produced by copolymerizing the acrylic monomers with a carbamate functional vinyl monomer, column 5, lines 58-67. Therefore, Singer discloses applicants' clamed components (A)(I) and (A)(II) for the present claims 1, 33, 50 and 56. A second component (b) is an aminoplast resin which is a crosslinking agent, column 2, lines 53-54 and claim 11 at column 22. Aminoplast is obtained from the reaction of formaldehyde with an amine or amide, column 8, lines 42-43 and 57-59. Aminoplasts are readable in applicants' claimed component (B). The acrylic material has a number average molecular weight of from about 900 to 13,000, column 6, lines 41-42, for the present claim

32. The clear film-forming composition may be water-borne such as dispersed in water, column 9, lines 16-19.

The difference between the present claims and Singer is the requirement in the present claims of a first block (A)(I) comprising the reaction product of at least one ethylenically unsaturated monomer (a) and at least one vinylaromatic hydrocarbone monomer (b). Also, the present invention requires a water-based coating composition.

However, it would have been obvious to one of ordinary skill in the art to consider that a curable clear coating composition in Singer can be formulated from selected at least one ethylenically unsaturated monomer and other polymerizable ethylenically unsaturated monomers such as vinylaromatic compounds, column 5, line 46, because any combinations of ethylenically unsaturated monomers for producing a block copolymer in Singer can be made within the same resulting expectation, and since the various ways of the selected ethylenically unsaturated monomers are depending on the desired characteristics of the coating compositions. It would have been obvious to one of ordinary skill in the art to use a water as a medium for the clear film-forming composition in Singer since in the alternative the clear film-forming composition may also be dispersed in water, column 9, line 19.

(1) ***Claim Rejections - 35 USC § 112***

3. Claim 56 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 56 recites the broad recitation of definitions for radicals with the proviso that at least two of the variables R1, R2, R3, and R4 are substituted or unsubstituted aryl, arylalkyl or arylcycloalkyl radicals, and the claim also recites especially substituted or unsubstituted aryl radicals, which is the narrower statement of the range/limitation.

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 09/30/02 was filed after the mailing date of the application 09/747,473 on 12/22/2000. The information disclosure statement is considered by the examiner.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Olga Asinovsky whose telephone number is 703-308-0041. The examiner can normally be reached on 9:00 to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 703-308-2462. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7718 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Olga Asinovsky
Examiner
Art Unit 1711

O.A

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April 26, 2003

James J. Seidleck
Supervisory Patent Examiner
Technology Center 1700